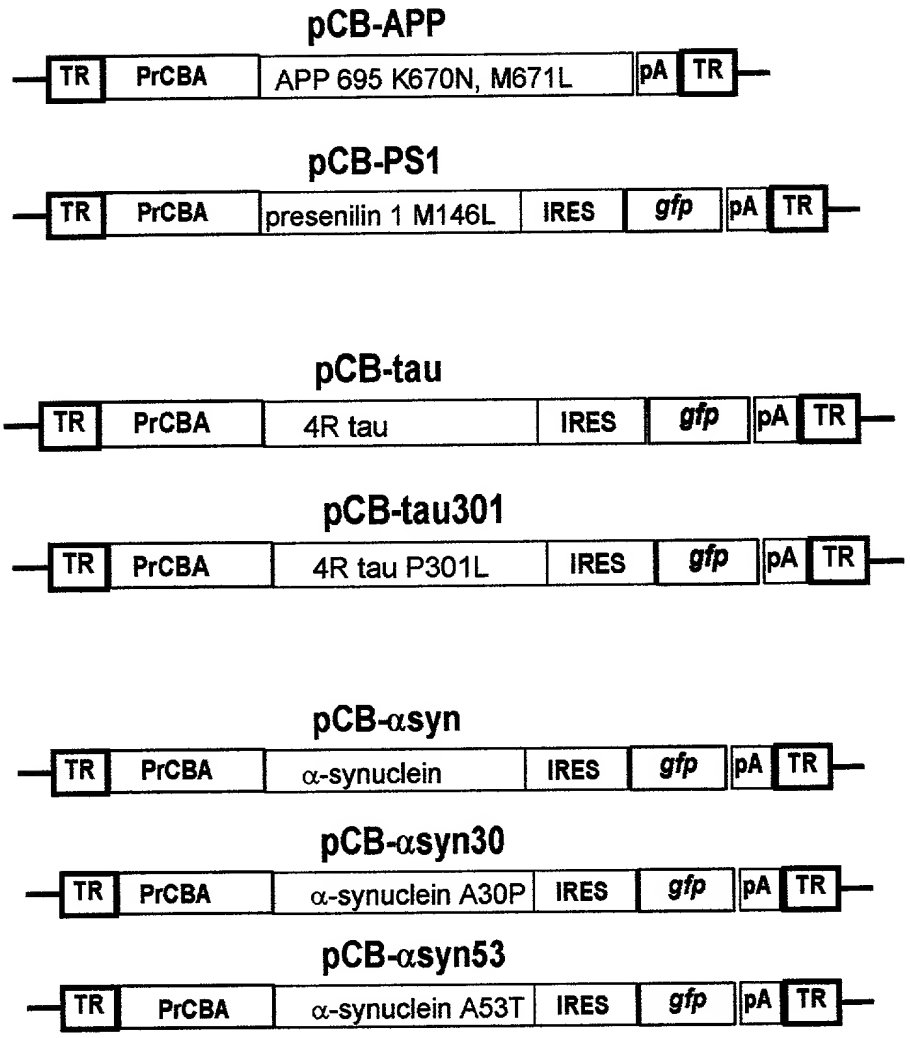
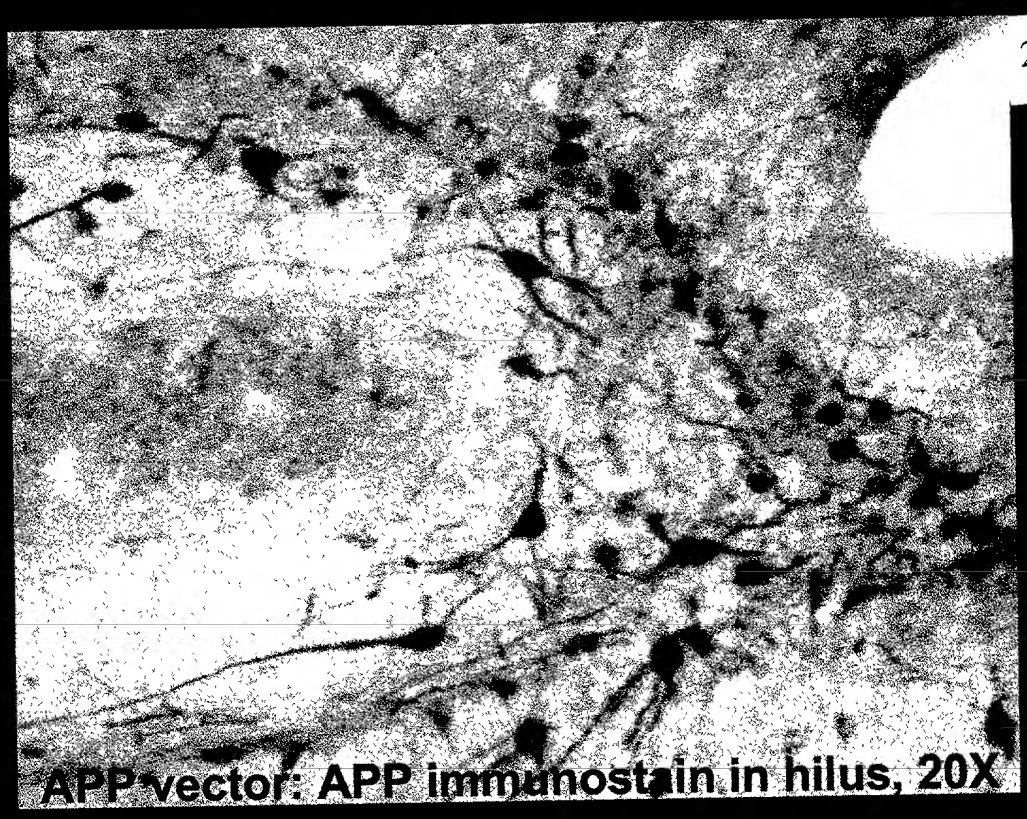


FIGURE. 1. DNA Constructs used in this application. The schematic diagrams represent the expression cassettes which are packaged into the recombinant adeno-associated virus (AAV) vectors. Abbreviations: TR, AAV terminal repeats; PrCBA, cytomegalovirus/chicken beta-actin hybrid promoter; IRES, internal ribosome entry sequence which allows for bicistronic expression of two transgenes; gfp, green fluorescent protein; pA, poly adenylation sequence. Human DNA sequences to model neurodegenerative diseases: APP, amyloid precursor protein mutant form linked to Alzheimer's disease; presenilin 1 mutant form linked to Alzheimer's disease; tau wild type and mutant form linked to fronto-temporal dementia with parkinsonism linked to chromosome 17; alpha-synuclein wild type and mutant forms linked to Parkinson's disease.


2A
APP vector: APP immunostain in hilus, 20X

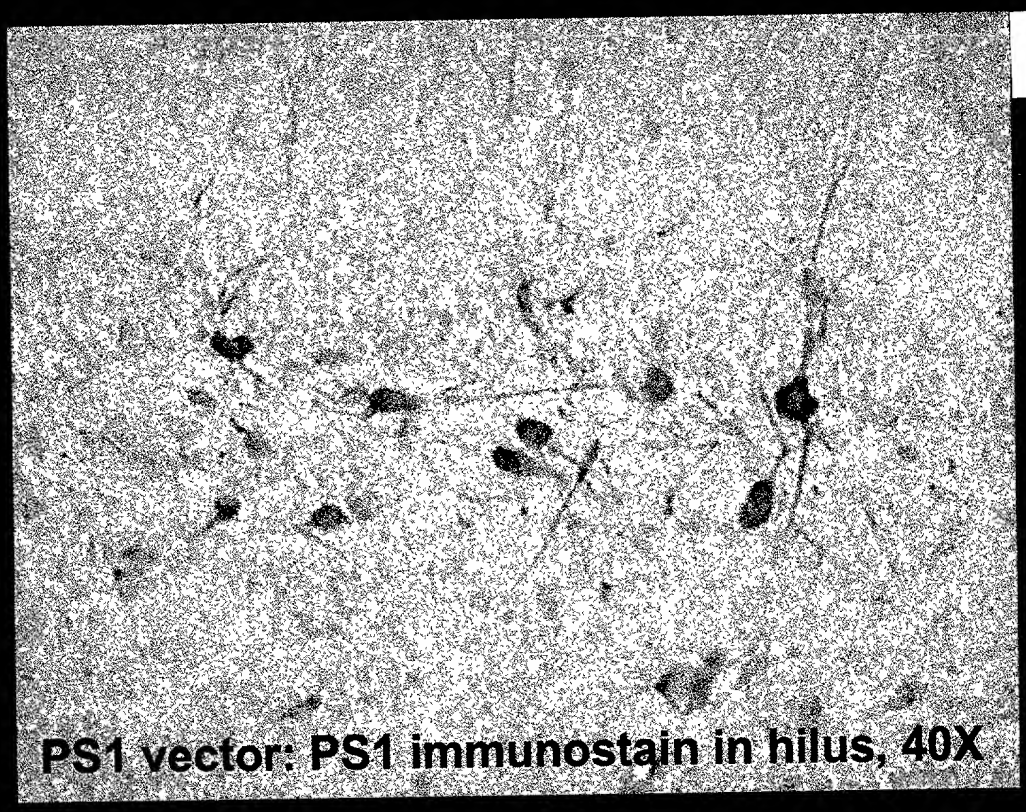

2B
PS1 vector: PS1 immunostain in hilus, 40X

FIGURE 2

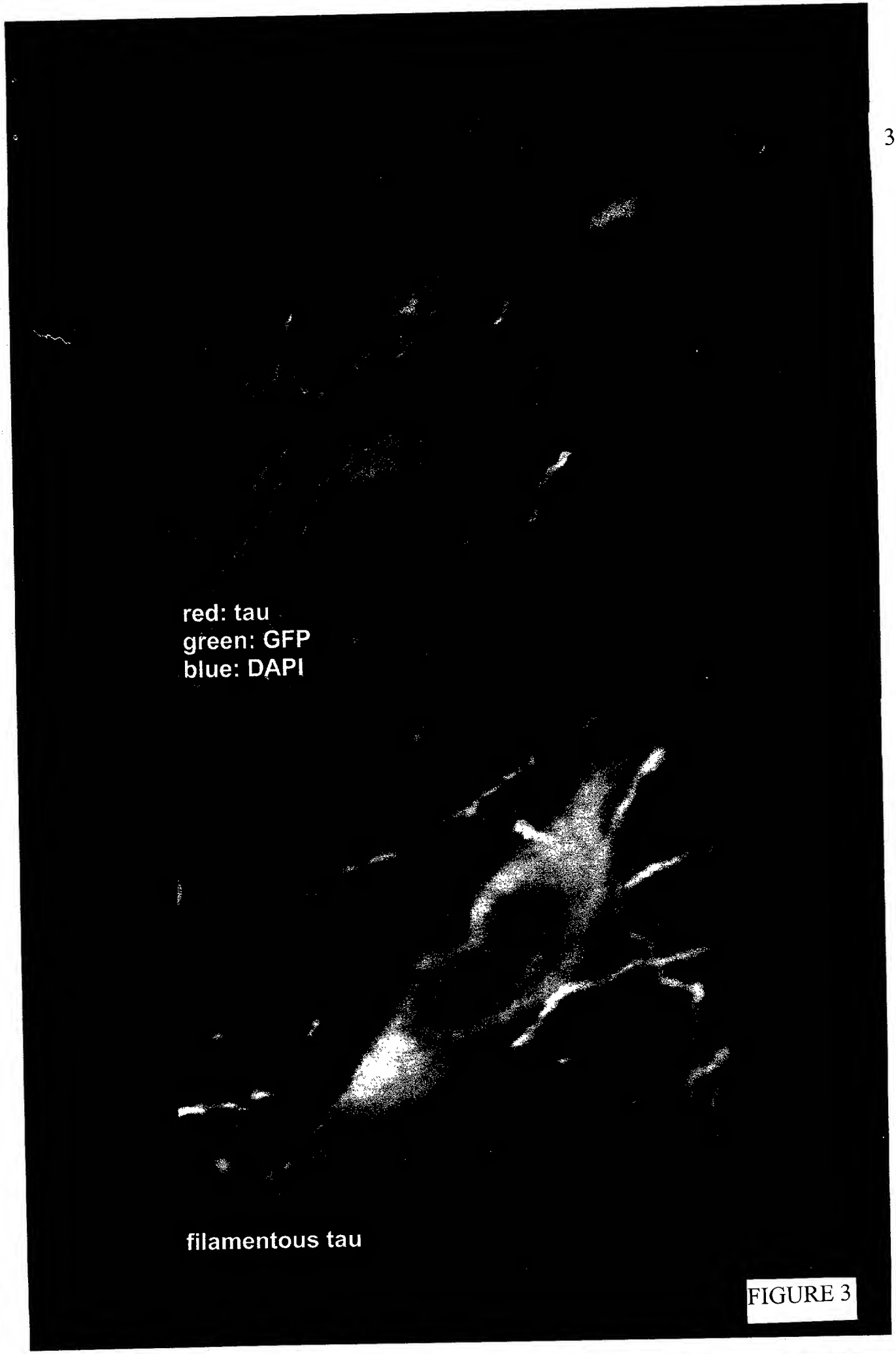


FIGURE 3

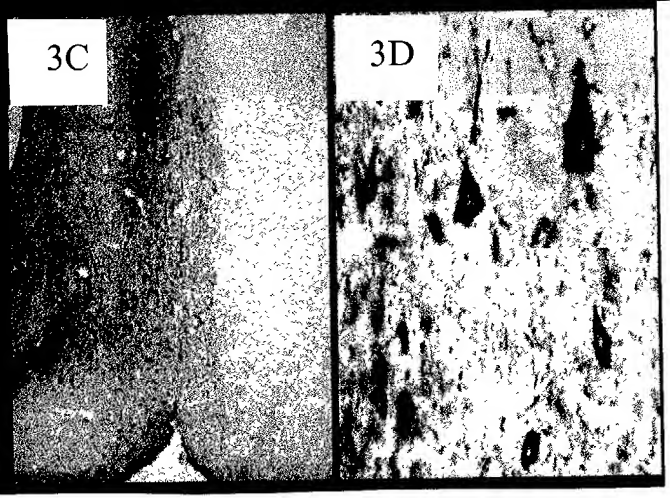


FIGURE 3

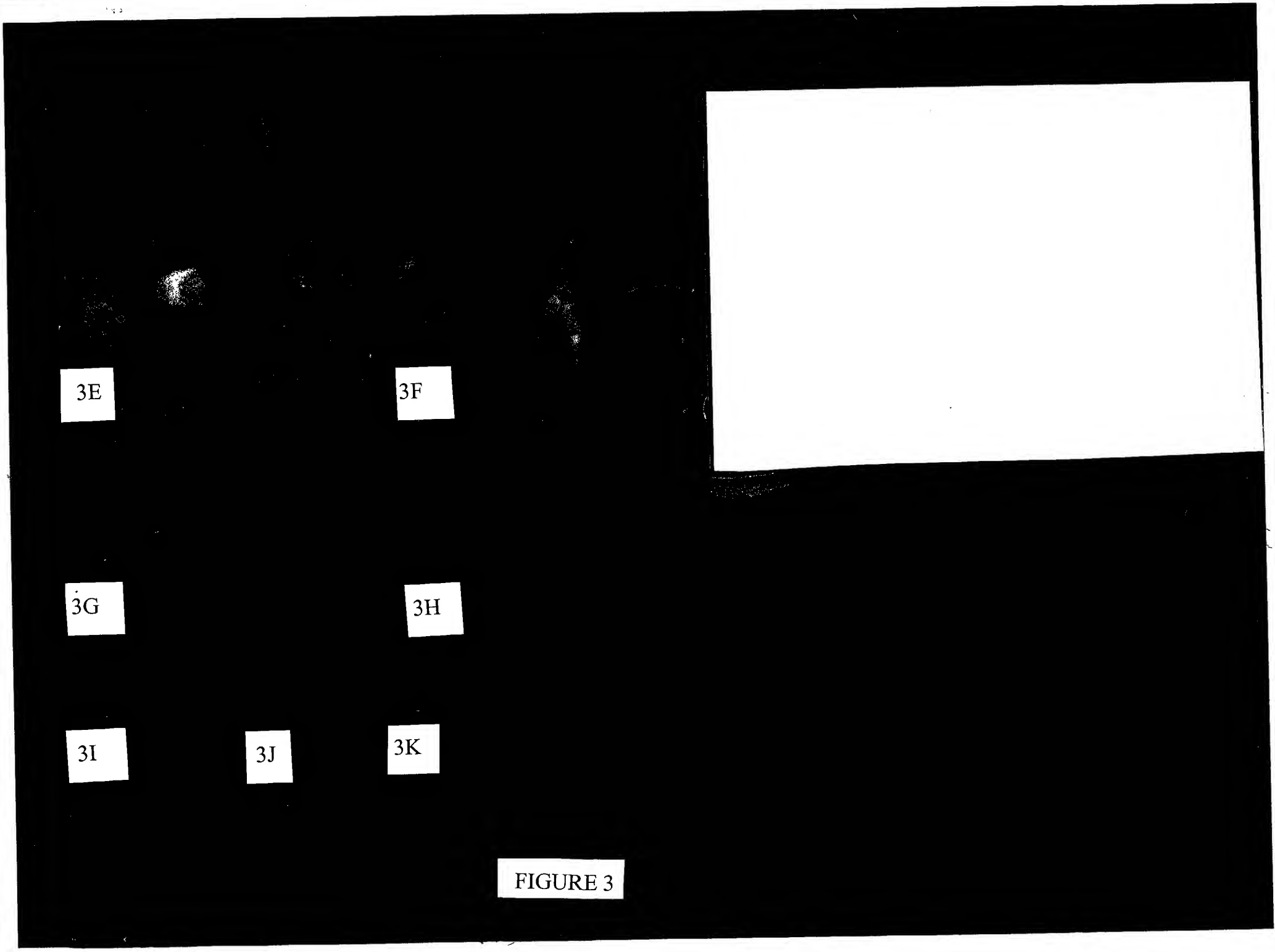


FIGURE 3

A

C

B

FIGURE 4

A30P α-synuclein somatic gene transfer and axon morphology

4D

α-syn AAV
GFP native fluorescence

4E

4F

FIGURE 4

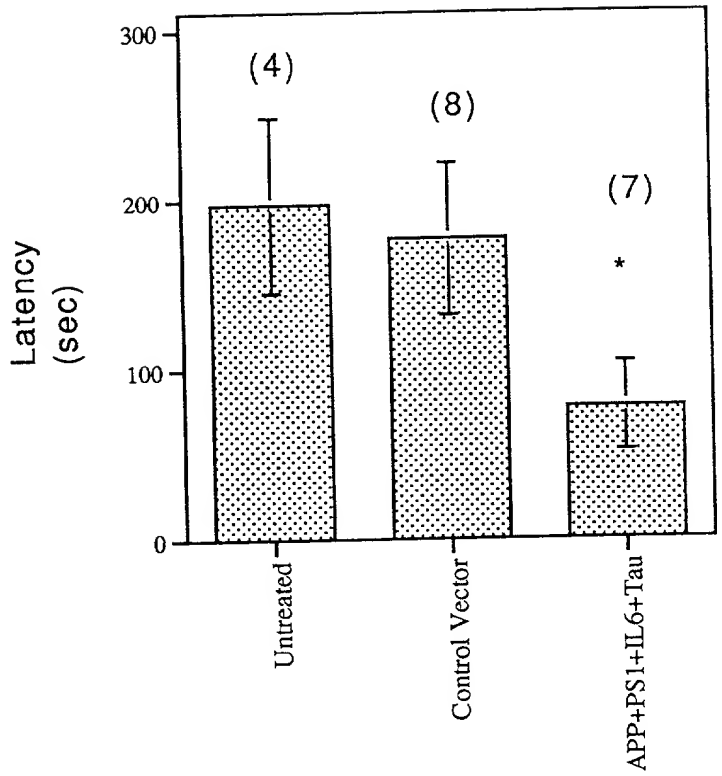
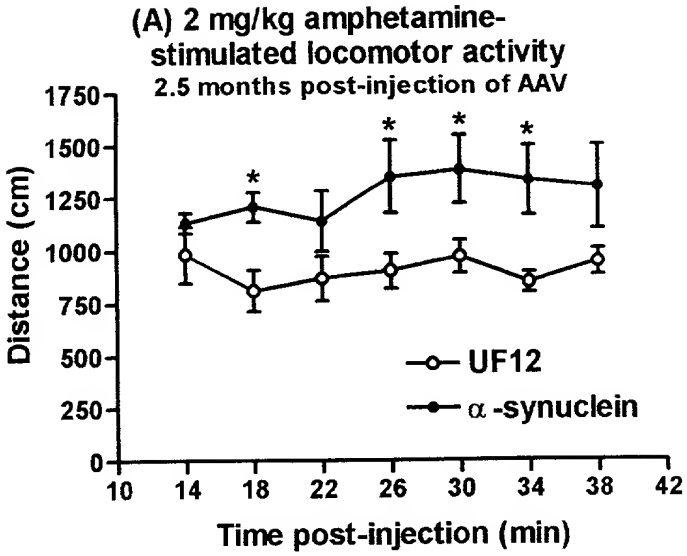
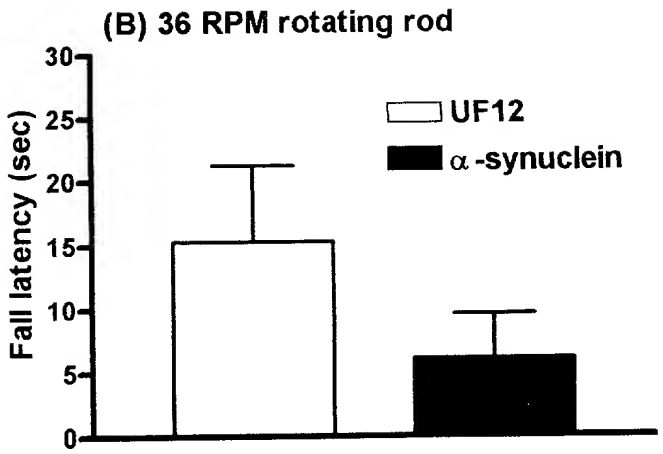

300
200
100
0
Latency
(sec)
(4)
(8)
(7)
*
Untreated
Control Vector
APP+PS1+IL6+Tau

FIGURE 5



6A



6B

FIGURE 6